



### **Jurisdiction and Venue**

3. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338 because this action arises under the patent laws of the United States (Title 35 of the United States Code).

4. This Court has personal jurisdiction over Defendant because Defendant resides in Michigan and has conducted and continues to conduct business in this judicial district. In addition, Defendant has engaged in activities related to Foam Solution's claims of patent infringement.

5. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1400(b) because Defendant resides in this district. Venue is also proper in this district because Defendant has a regular and established place of business and has committed acts of patent infringement in this district.

### **Technological Background**

6. Lead-acid batteries are a common source of electrical energy and are often used as automotive batteries, marine batteries, consumer equipment batteries, industrial batteries, among other uses.

7. Included in the components of lead-acid batteries are numerous plates that are made of lead alloy metal grids.

8. The grids may be made in a process that makes them into a continuous strip of metal with individual grids in the strip made from lead or a lead alloy material. The strips are designed with an interconnected wire structure having open spaces to receive a paste material.

9. The grids pass through a grid pasting machine, where the electrochemically active paste material is applied to the grids. The thickness of the paste material applied to the grid

should be as consistent and even as is practical, both along the longitudinal direction of the strip as well as the side-to-side direction of the strip.

10. Grid pasting machines typically include a hopper for holding the paste material to be applied to the grid, and a belt for conveying the grids under the hopper where the paste material is applied. The belt is spaced from the hopper thus creating a space that allows the paste material to be applied to the grid.

11. In earlier grid pasting machines, adjustments to the machines were manually performed to make the space as uniform as practical to uniformly apply the paste material.

12. After the paste material has been applied, the paste material is then dried which adheres it to the grid.

13. Wirtz developed a battery grid pasting machine and system that automated the process of applying a uniform thickness of paste material to a grid. The machine and process allow for continuous pasting of the grid, by, *inter alia*, including a hopper that includes: an orifice with an orifice plate that more efficiently dispenses the paste material onto the grid, a sensing that senses properties of the grid, for example the thickness of the paste material, and a controller that can control structure on the machine to keep the space between the hopper and the belt as uniform as practical.

14. Wirtz's grid pasting machine and system allow for uniform application of the grid pasting material, resulting in less waste, and greatly reducing the need for human intervention to adjust the space between the hopper and the belt.

15. Wirtz's patented its novel and nonobvious grid pasting machine and system.

**Wirtz' U.S. Patent No. 9,744,552 B2**

16. Wirtz is the owner of U.S. Patent No. 9,744,552 B2 entitled “Battery Grid Pasting Machine and System,” hereafter “the ’552 Patent.” A true and accurate copy of the ’552 Patent is attached as Exhibit A.

17. The ’552 patent was duly and lawfully issued on August 29, 2017 and remains in full force and effect.

18. In general, the ’552 Patent is directed to a machine and system for consistently applying a grid pasting material to a grid. The ’552 Patent addresses the need for an efficient way to uniformly apply the paste material to the grid. The machine and system allow the grid pasting operation to be continuous and automated. Some of the structures of an embodiment are generally described below. While the brief description is provided, the specification and the claims of the ’552 patent identify what is described and claimed. (No claim construction is intended or implied, and the following paragraphs relating to the description are by way of introduction only.) This description is to very generally introduce certain components that may be included in the claimed invention and described in the specification.

19. Figures 1–3 of the ’552 Patent show an embodiment of a machine and system for consistently applying a grid pasting material to a grid. Figure 2 shows portions of the machine, including a hopper 80 having an orifice plate 90 with an orifice 91 (best seen in figure 9). Figure 2 shows a belt 50 is shown for conveying the grid through the machine. The space between the hopper and the belt is best seen in Figure 1A. Paste material is dispensed from the hopper 80 through the orifice 91 and onto the grid. Figures 1A, 2, and 9 are marked up to show an example of these components and included as Exhibit B.

20. The space between the hopper and the belt is adjusted by servo rotary actuators 94 (only one shown) which are coupled with the hopper 80. Actuation of the servo rotary motors 94, 96 moves the hopper up (away from) or down (toward) with respect to the belt 50.

21. A sensing station 30 that includes a thickness sensor 32 checks the thickness of the paste material applied to the grid. The thickness sensor is coupled with a controller 118. The controller controls operations within the grid pasting system.

22. Claim 16 of the '552 Patent recites:

16. A battery grid pasting system, the system comprising:

a battery grid pasting machine comprising:

a hopper having a dispensing end with an orifice plate having an orifice that dispenses battery paste onto and through a grid; and

a conveying apparatus moving grids through a space under and across said orifice of said dispensing end of said hopper and to receive battery paste from said orifice of said dispensing end; and

a first servo rotary actuator coupled to a first connector coupled to said hopper;

a second servo rotary actuator coupled to a second connector coupled to said hopper;

a sensing station located downstream of said hopper with respect to the direction of travel of the battery grids, said sensing station sensing a value of at least the thickness of the battery paste of a pasted battery grid; and

a controller electrically coupled to said first and second servo rotary actuators and electrically coupled to said sensing station, and said controller receiving said sensed value and controlling actuation of said servo rotary actuators based at least in part thereupon to vary

said generally vertical extent of said space by movement of said first and second connectors and said hopper and hence vary the amount of battery paste received on the battery grids.

**Count I — Infringement of the '552 Patent**

23. Wirtz repeats and realleges the allegations contained in paragraphs 1 through 22 as if fully set forth herein.

24. Defendant offers for sale battery grid pasting machines and systems that continuously applies a uniform thickness of paste material to a grid in an automated manner.

25. Defendant provides a description of its machine and system in a brochure, Exhibit C, and in a LinkedIn post, Exhibit D.

26. Defendant's system includes all of the elements of claims of the '552 including, but not necessarily limited to claim 16.

'552 Patent Claim 16	Defendant's System and Machine
a battery grid pasting machine comprising	<b><i>MAC Steel Belt Paster</i></b>
a hopper having a dispensing end with an orifice plate having an orifice that dispenses battery paste onto and through a grid	<b><i>Tight Tolerances:</i></b> The MAC Steel Belt Paster uses a variable speed independently powered paste dispensing hopper featuring Orifice plate type tooling (no trowel roll).
a conveying apparatus moving grids through a space under and across said orifice of said dispensing end of said hopper and to receive battery paste from said orifice of said dispensing end	A stainless steel belt pulls the strip through the hopper for more consistent production compared to a beltless orifice or drum type paster.

a first servo rotary actuator coupled to a first connector coupled to said hopper	Add the optional servos to the hopper and connect it to a laser thickness gauge, will close the loop for total automatic control.
a second servo rotary actuator coupled to a second connector coupled to said hopper	Add the optional servos to the hopper and connect it to a laser thickness gauge, will close the loop for total automatic control.
a sensing station located downstream of said hopper with respect to the direction of travel of the battery grids, said sensing station sensing a value of at least the thickness of the battery paste of a pasted battery grid	Add the optional servos to the hopper and connect it to a laser thickness gauge, will close the loop for total automatic control.
a controller electrically coupled to said first and second servo rotary actuators and electrically coupled to said sensing station, and said controller receiving said sensed value and controlling actuation of said servo rotary actuators based at least in part thereupon to vary said generally vertical extent of said space by movement of said first and second connectors and said hopper and hence vary the amount of battery paste received on the battery grids	Add the optional servos to the hopper and connect it to a laser thickness gauge, will close the loop for total automatic control.

27. Defendant has directly infringed, and continues to directly infringe, at least claim 16 of the '552 Patent in violation of 35 U.S.C. § 271(a), either literally or under the doctrine of

equivalents, by making, using, importing, offering to sell, and/or selling its accused pasting machine and system and performing its pasting method, and will continue to infringe unless enjoined by this Court.

28. Defendant is aware that the accused device infringes at least claim 16 of the '552 Patent, having received notice by way of letter dated April 16, 2024. Defendant has not denied infringement after receiving the notice.

29. Defendant has indirectly infringed, and continues to indirectly infringe, at least claim 16 of the '552 Patent under 35 U.S.C. § 271(b) by knowingly inducing at least its customers to make or use the claimed pasting system and machine, and will continue to infringe unless enjoined by this Court.

30. Defendant has indirectly infringed, and continues to indirectly infringe, at least claim 16 of the '552 Patent under 35 U.S.C. § 271(c) by providing to its customers a component of the patented pasting machine, knowing the same to be especially made or adapted for infringement of at least claim 16 of the '552 Patent, and that the component that Defendant supplies is not a staple article of commerce for substantial non-infringing use. its customers to make or use the claimed pasting system and machine, and will continue to infringe unless enjoined by this Court.

31. Defendant's infringing conduct has caused, is causing, and will continue to cause irreparable injury to Wirtz unless such infringing conduct is enjoined by this Court.

32. On information and belief, Defendant knowingly and intentionally infringed and continues to infringe at least claim 16 of the '552 Patent, by virtue of its prior knowledge of the '552 Patent.



33. Defendant was put on notice of its infringement of at least claim 16 of the '552 Patent at least as of April 16, 2024 when Wirtz sent a letter to Defendant explaining Defendant's infringement.

**RELIEF REQUESTED**

WHEREFORE, Wirtz respectfully requests that this Court enter a judgment that:

A. Finds Defendant has directly infringed, and is directly infringing, one or more claims of the '552 Patent;

B. Finds Defendant has indirectly infringed, and is indirectly infringing, one or more claims of the '552 Patent;

C. Awards Wirtz damages adequate to compensate for Defendant's infringement of the '552 Patent under 35 U.S.C. § 284 of not less than a reasonable royalty and increases those damages up to three times;

D. Finds this case exceptional as set forth in 35 U.S.C. § 285;

E. Awards Wirtz its attorneys' fees;

F. Orders Defendant and its officers, directors, agents, servants, employees, successors, assigns, and all persons in active concert or participation with Defendant, be preliminarily and permanently enjoined from infringing the '552 Patent pursuant 35 U.S.C. § 283;

G. Awards Wirtz costs, pre-judgment and post-judgment interest at the maximum allowable rate; and

H. Awards Wirtz such further relief as the Court deems just and proper.

Respectfully submitted,

Dated: November 15, 2024

By: s/ Richard W. Hoffmann  
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Inc.*

**JURY TRIAL DEMANDED**

Wirtz demands a jury trial on all issues so triable.

Respectfully submitted,

Dated: November 15, 2024

By: s/ Richard W. Hoffmann

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